Special Issue

Vibrational Spectroscopy for Mineral Exploration, Mining, and Environmental Monitoring

Message from the Guest Editor

This Special Issue on “Infrared Functional Groups of Minerals” aims to build a bridge between the detailed mineralogical and crystallographic studies that have been focussed on single mineral phases and the selected absorption features on one side and applied mineralogy and geochemistry on the other side. The main body of this Special Issue is a series of contributions that discuss the most commonly occurring infrared functional groups of rock forming minerals, including OH, SiO, CO3, SO4, PO4, NO2 & NO3, BO3 & BO4, and (Fe,Ti)O4. These are followed by overviews of remote-, field- and lab-based reflectance spectroscopic technologies currently available to geologists. Chapters such as the review of ab initio calculations of infrared functional groups of rock forming minerals and impacts of crystallinity and petrophysical characteristics aim at the advanced reader who would like to get a more in-depth understanding of the contribution of the various components to the overall spectral signatures. The Special Issue aims to empower economic geologists with mineralogy across scales.

Guest Editor

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Deadline for manuscript submissions

closed (18 December 2020)

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About the Journal

Message from the Editor-in-Chief

Minerals welcomes submissions that report basic and applied research in mineralogy. Research areas of traditional interest are mineral deposits, mining, mineral processing and environmental mineralogy. The journal footprint also includes novel uses of elemental and isotopic analyses of minerals for petrology, geochronology and thermochronology, thermobarometry, ore genesis and sedimentary provenance. Contributions are encouraged in emerging research areas such as applications of quantitative mineralogy to the oil and gas, manufacturing, forensic science, climate change, geohazard and health sectors.

Editor-in-Chief

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Journal Rank:

JCR - Q2 (Mining and Mineral Processing) / CiteScore - Q1 (Geology)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.2 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).

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